From:	Sarah Winfield
To:	Russell Wasem
Cc:	Aaron Niman; Bill Jacobs; Colwell Cook; Elizabeth Hill; Jack Fowle; John Hebert; Khin Oo; Kristina Garber; Laura Parsons; Mark Corbin; Meredith Laws; Michael Wagman; Neil Anderson; Nicholas Mastrota; Scott Garrison; Shanna Recore; Shannon Borges; Timothy Kiely; DavidJ Miller
Subject:	Re: DD Briefing Pre-Meet (Call In Number)
Date:	09/08/2011 06:14 PM

Hello Rusty,

The following are HED's bullets for the briefing.

Please let Shanna and I know if there is anything else you need.

Thanks!
Sarah

Rodenticides --> human incident data

HED looked at the following sources of information when considering human exposure to rodenticides:

- American Association of Poison Control Centers (AAPCC)
- Incident Data System (IDS)
- NIOSH Sentinel Event Notification for Occupational Risks (SENSOR)
- California Pesticide Incident Surveillance Program (CA PISP)
- Open literature

We found from 1999 to 2009:

- In AAPCC, 2nd generation anticoagulants account for the most (75%) reported exposures to children
- In IDS, brodifacoum (41%) and bromadiolone (22%) (both 2nd gen anticoagulants) account for the most reported exposures, followed by bromethalin (non-anticoagulant) at 12%.

Across different sources of human incident data, rodenticides appear to be involved in numerous incidents, especially involving children less than 6 years old.

- Almost all rodenticide exposures appear to be the result of label directions, to keep bait away from children, pets and non-target wildlife, not being followed.
- Despite label directions stating "apply bait out of the reach of children," exposures to children are happening, even in cases where users are attempting to comply. This is potentially due to:
    - the accessibility of rodenticide pellets/blocks which are used almost exclusively as poison baits placed on the floor where children later find them,
    - the size and shape of the pellets/blocks which are small and easily handled and eaten by small children,
    - the hand-to-mouth behaviors of small children.

Using the AAPCC Annual reports from 1999-2009,

- Approximately 17,000 exposure are reported per year resulting in approximately 5000 (30%) visits to a health care facility (HCF)
- Of these approximately 500/year (3%) are symptomatic (i.e. classified as minor, major, moderate)

- 85% (or 15,000) of these are to children under 6 years old

Using more detailed data that we have in-house from 1999-2005

- Approximately 100,000 (14,000/yr) rodenticide exposure reported resulting in approximately 14,000 (2000/yr) children under 6 years old visiting a HCF (30% of the total rodenticide related HCF visits from 1999-2005)
- Approximately 1% of the exposed children under 6 years old are symptomatic (i.e. classified as minor, moderate or major)

Despite label warning/directions thousands of children are still accessing and getting exposure to rodenticides each year.

Rodenticides --> pet incident data

In the pet incident analysis, the following incident data sources are considered:

- The OPP Incident Data System (IDS), the Office's incident data system
- The National Pesticide Information Center (NPIC; previously NPTN), a cooperative effort between Oregon State University and the EPA which is funded by the Agency
- The National Animal Poison Control Center APCC, using publicly available information via their website
- The Pet Poison Helpline, using publicly available information via their website

Across different sources of pet incident data, rodenticides appear to be a likely category of toxins/poisons involved in pet incidents.

- OPP's IDS identifies two rodenticides (brodifacoum and bromadiolone) in the top 20 pesticides most likely associated with a domestic animal fatality
    - From 1999-2009 in OPP's IDS, there are 200-2000 rodenticides pet exposures per year, many of which result in severe outcomes (on average 14% result in death or a major outcome), which may necessitate veterinary care.
- In 2010, NPIC identified zinc phosphide as the most likely pesticide to be reported to be involved in a pet exposure (54% of all reported pet exposures).
- In 2010, APCC identifies rodenticides as the third most likely poison pets are exposed to and the Pet Poison Helpline identifies rodenticides as the third most common toxin involved in dog poisonings and the fourth most common toxin involved in cat poisonings.

However, different databases identify different rodenticides as resulting in the most frequent exposures.

- OPP's IDS identifies brodifacoum, bromadiolone, bromethalin and diphacinone as most likely to be involved in a domestic animal exposure involving a rodenticide; and of these, brodifacoum and diphacinone appear to have an increased likelihood of resulting in an outcome of higher severity.
- NPIC (both via their standard route of reporting and the veterinary reporting portal) identifies zinc phosphide as the most likely to be involved in an animal exposure involving a rodenticide. Via the standard reporting route, the same four rodenticides identified in IDS as most likely to be involved in an animal exposure (albeit in a slightly different order) are also identified: diphacinone, bromadiolone, bromethalin and brodifacoum.

In sum, rodenticides appear to be involved in numerous reported pet poisonings,

when looking across pet incident data sources. Furthermore, pet exposure to rodenticides has the potential to result in severe outcomes and/or necessitate veterinary care. Additionally, upon review of available narratives, it appears these exposures are a result of the baits being easily accessed by pets.

▼ Russell Wasem---09/08/2011 02:15:49 PM---We have had a request for a call in number. Here it is: [redacted]

From: Russell Wasem/DC/USEPA/US
To: Aaron Niman/DC/USEPA/US@EPA, Bill Jacobs/DC/USEPA/US@EPA, Colwell Cook/DC/USEPA/US@EPA, Elizabeth Hill/DC/USEPA/US@EPA, Jack Fowle/DC/USEPA/US@EPA, John Hebert/DC/USEPA/US@EPA, Khin Oo/DC/USEPA/US@EPA, Kristina Garber/DC/USEPA/US@EPA, Laura Parsons/DC/USEPA/US@EPA, Mark Corbin/DC/USEPA/US@EPA, Meredith Laws/DC/USEPA/US@EPA, Michael Wagman/DC/USEPA/US@EPA, Neil Anderson/DC/USEPA/US@EPA, Nicholas Mastrota/DC/USEPA/US@EPA, Sarah Winfield/DC/USEPA/US@EPA, Scott Garrison/DC/USEPA/US@EPA, Shanna Recore/DC/USEPA/US@EPA, Shannon Borges/DC/USEPA/US@EPA, Timothy Kiely/DC/USEPA/US@EPA
Date: 09/08/2011 02:15 PM
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